

REMARKS

This Amendment responds to the Office Action mailed June 12, 2008. Claims 1, 3-12, 14, 15, 17-20 and 28-30 are currently pending. Claims 31 and 32 have been added to round out the scope of protection sought.

Art Rejections

Claims 1, 3-13, 18, 19, and 30 stand rejected under 35 U.S.C. § 103(a) as being allegedly obvious over U.S. Patent No. 4,358,916 ("Lacasse") in view of U.S. Patent No. 4,579,785 ("Karoubas"). Applicants respectfully traverse.

The applied references do not teach placing transverse corrugations in a curved central portion of a building panel, and even if hypothetically combined, the applied references would not yield the claimed invention

Claim 1 is not obvious in view of the applied references since they contain no teaching of transverse corrugations in a curved central portion, and even if hypothetically combined would not yield the claimed invention. Claim 1 recites, among other things, a building panel, comprising a curved central portion having transverse corrugations therein. Claim 15 similarly recites, among other things, a plurality of building panels, each panel comprising a curved central portion having transverse corrugations therein. A non-limiting example of a building panel according to the present application is shown in Figure 9, which is reproduced below.

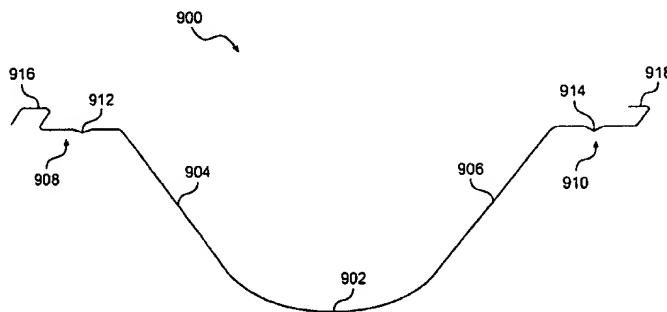


FIG. 9

Fig. 9 of Present Application

The Examiner alleges (Office Action at p. 2) that Lacasse discloses a central curved portion 330 that has transverse corrugations therein (see Fig. 9). However, it is clear from at least Figure 9 and Figure 1 of Lacasse (shown below) that the disclosed panel members do not have transverse corrugations therein. As shown in Figures 1 and 9 of Lacasse below, contrary to the Examiner's assertion, Lacasse clearly discloses only longitudinal corrugations.

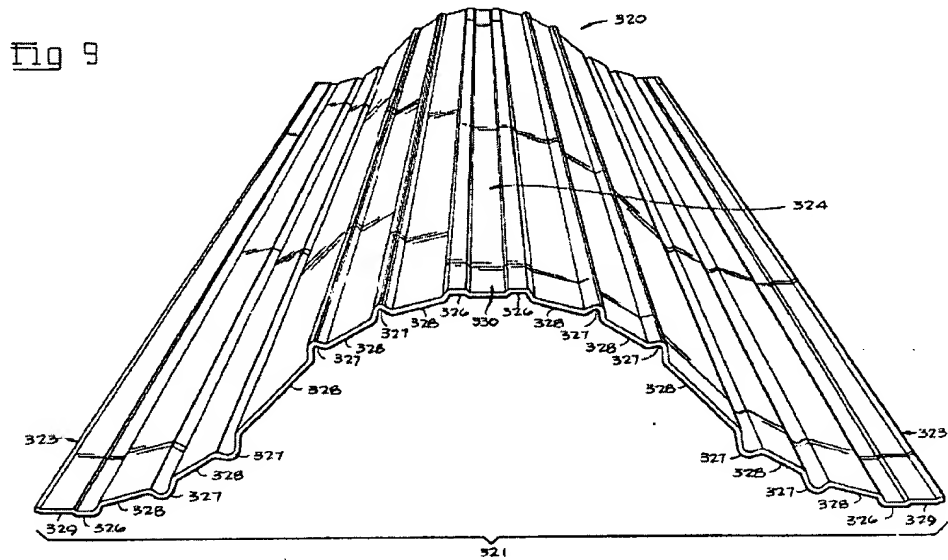


Fig. 9 of Lacasse

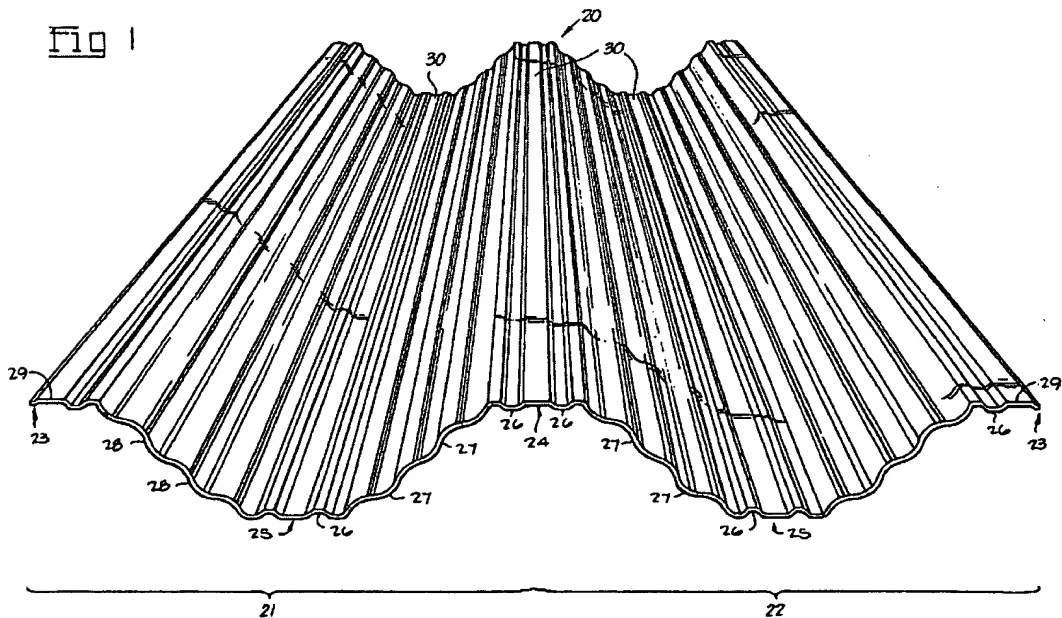


Fig. 1 of Lacasse

Additionally, the Examiner apparently looks to Karoubas for a teaching of transverse corrugations stating, "Karoubas discloses corrugations extending in both directions transverse and longitudinal" Office Action dated June 12, 2008 at 2. However, Karoubas does not disclose transverse corrugations in a *central portion* of a building panel whatsoever, and does not even disclose a *curved* central portion. Rather, Karoubas discloses corrugated metal decking having interconnecting webs 14 containing embossments 16 therein and having a rib 13 in a flat portion 12. See Karoubas Fig. 1 (shown below) and col. 3, lines 5-25. The rib 13 is arranged longitudinally along the length of the panel, and the embossments 16, which the Office alleges correspond to the transverse corrugations, are not formed in the central portion 12, but, rather, are formed in what the present application would consider side wall portions. The transverse embossing 16 in the side walls of Karoubas's panel is oriented differently than the longitudinal ribs 13 of the central portion of Karoubas's panel, and there is no teaching in Karoubas for substituting one for the other. Thus, there is no teaching in Karoubas of placing transverse corrugations in a central portion, let alone a curved central portion. For at least these reasons, Karoubas fails to make up for the deficiencies of Lacasse.

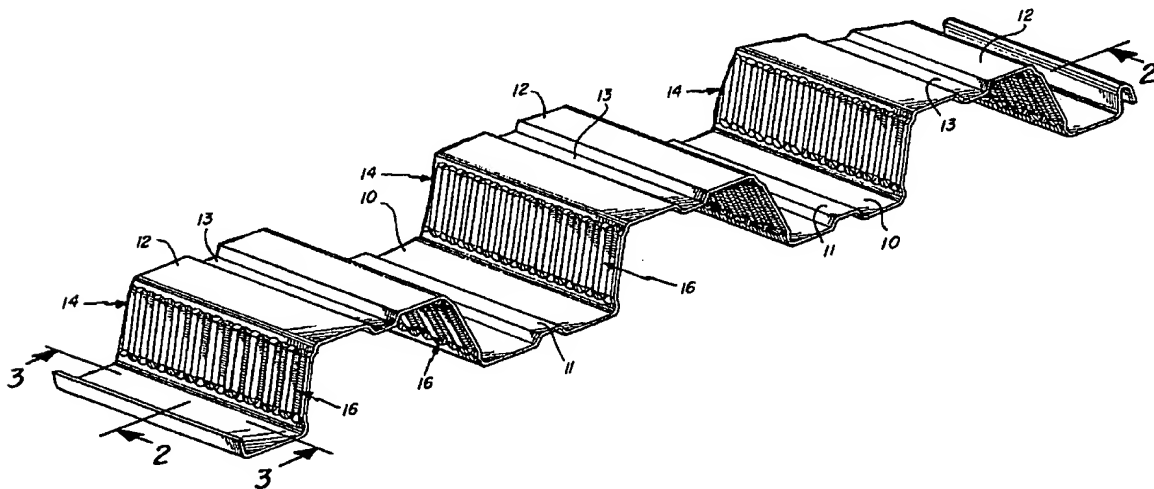


Fig. 1 of Karoubas

Accordingly, it is readily apparent that the applied references contain no teaching of transverse corrugations in a curved central portion, and even if hypothetically combined as suggested by the Examiner, Lacasse in combination with Karoubas would not yield a building panel having a curved central portion with transverse corrugations therein. Withdrawal of the rejection and allowance of claims 1 and 15 is respectfully requested for at

least these reasons. Claims 3-13, 18, 19, and 30 are allowable at least by virtue of dependency.

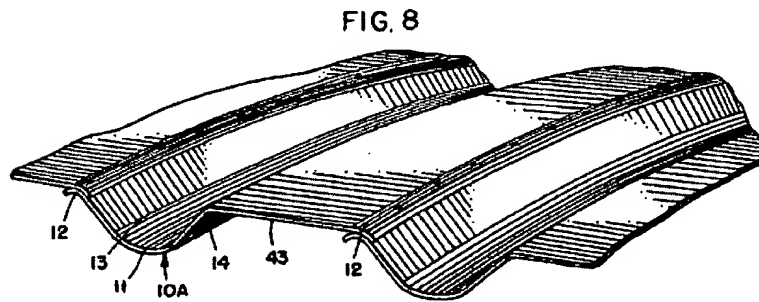
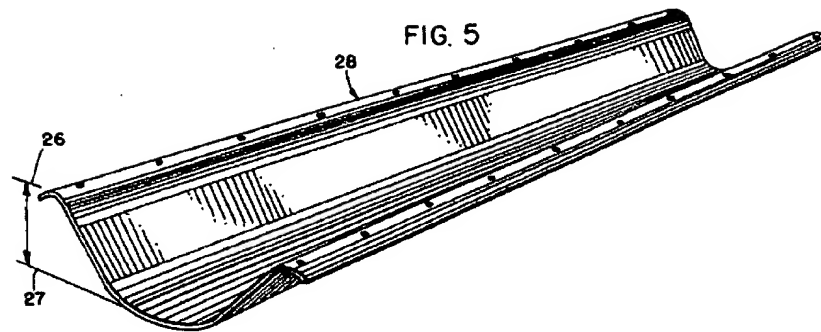
The present obviousness rejections improperly ignore art that strongly “teaches away” from using transverse corrugations in a curved central portion

The present rejections ignore art that teaches away from the claimed claimed subject matter – art that the Office has previously considered anticipatory but now does not – and in doing so the rejections improperly ignore subject matter that supports the patentability of the present claims. MPEP 2143.01(II) states:

The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art, and *all teachings in the prior art must be considered to the extent that they are in analogous arts*. MPEP 2143.01(II), p. 2100-139, Rev. 6, Sept. 2007 (emphasis added).

In this present rejection, the Office is clearly not considering “all” the teachings in the prior art and what the combined teachings would have suggested to one skilled in the art.

Prior to Applicants’ recent amendment to the independent claims to recite that the curved central portion had corrugations therein (i.e., transverse corrugations), the Office had rejected the claims as allegedly anticipated by U.S. Patent No. 3,009,509 (“Martin”). Martin is a reference the Office to reject the claims after *four years* of substantive examination. However, Martin contains an express teaching away from transverse corrugations in a central portion as described in Applicants’ Amendment dated October 9, 2007 at 5-6. For purposes of illustration, Figures 5 and 8 of Martin are shown below. Martin is not now being applied in the present rejection. Nonetheless, Martin is pertinent because the Office previously considered it an anticipatory reference, and now, after being shown that the claimed subject matter is distinct at least because Martin teaches away from doing what is claimed, the Office seeks to ignore it -- contrary to the instructions noted in the MPEP as set forth above.



Figs. 5 and 8 of Karoubas

In response to the prior rejection based on Martin, Applicants amended the claims to recite that the curved central portion included corrugations therein, and highlighted portions of Martin's disclosure that teach away from using transverse corrugations as now claimed:

Heretofore, many panels of this type and configuration have been developed, but in nearly all cases transverse corrugations or the like have been formed in the panel in order to form the longitudinal arch in the panel. *It has been found that these cross or transverse corrugations weaken the panels.* (Martin, col. 1, lines 23-28, emphasis added.)

Still another object of this invention is in the provision of a generally trough-shaped and longitudinally arched structural panel, wherein the longitudinal arching may be accomplished *without resorting to cross corrugations thereby giving a more durable and stronger panel.* (Martin, col. 1, lines 36-40, emphasis added.)

A still further object of this invention is in the provision of a method of making a generally trough-shaped and longitudinally arched structural panel having smooth inner and outer surfaces wherein the arching of the panel is accomplished *without forming any cross corrugations therein thereby providing a stronger and more rigid panel.* (Martin, col. 1, lines 44-50, emphasis added.)

In other words, Martin discloses that transverse corrugations weaken the panel, and the Office seeks to ignore this disclosure, contrary to the MPEP's direction. Instead, the

Office now applies Karoubas, art that is on it's face less relevant than Martin insofar as Karoubas does not even disclose a *curved* central portion as claimed, and attempts to attribute a teaching to Karoubas that it does not possess (transverse corrugations for a central portion). The Office is now silent on Martin, notwithstanding the fact that the Office's position on Lacasse and Karoubas is clearly in conflict with the teachings of Martin. It is believed that the Office's approach in this regard is plainly improper, and that the rejection of claims 1 and 15 should be withdrawn for at least this reason.

The Office is reminded that, as part of the consideration of obviousness, "a prior art reference that 'teaches away' from the claimed invention is a significant factor in determining obviousness" and that "the nature of the teaching is highly relevant and must be weighed in substance." MPEP § 2145(X)(D)(1) (internal quotations omitted). However, instead of considering and weighing the express teaching of Martin in issuing the instant rejection, the Examiner has now entirely discarded it without explanation. Martin's teaching away from the claimed subject matter and the failure of Lacasse and Karoubas to yield the claimed subject matter are significant evidence of non-obviousness. The rejections over Lacasse and Karoubas should be reconsidered and withdrawn for at least these additional reasons, and the pending claims should be allowed.

Claims 14-15, 17-20, and 28-29 stand rejected under 35 U.S.C. § 103 as being allegedly obvious over Lacasse in view of Karoubas and further in view of U.S. Patent No. 4,505,084 ("Knudson"). This rejection is respectfully traversed.

Lacasse in view of Karoubas and Knudson fail to teach or suggest "a curved central portion having transverse corrugations therein" as recited in independent claims 1 and 15 since, as discussed above, Lacasse and Karoubas clearly do not teach or suggest transverse corrugations. Moreover, the Examiner asserts that Knudson discloses "a curved central portion 25 having corrugations therein" (Office Action dated 6/12/08 at 3), but this is incorrect. As was previously pointed out to the Examiner in a response dated April 2, 2008 at page 6, Knudson fails to disclose a curved central portion at all. Figure 3 of Knudson does not teach or suggest an element 25 that is a curved central portion but rather discloses a flat intermediate portion 25. *See* Figure 3 and col. 2, lines 33-34 of Knudson. Thus, this rejection should be withdrawn for at least these reasons, and the pending claims should be allowed.

In addition, the Office's approach of incrementally adding one more reference on top of another is further suggestive of impermissible hindsight reconstruction. The Office previously asserted that Lacasse and Knudson rendered these claims obvious (Final Office

Action dated 1/2/2008 at 4-5). Then, after Applicants' pointed out the deficiencies in these references (Amendment dated 4/2/2008 at 6-7), the Office has now added Karoubas to the collection of references being applied to reject these claims. The Office's approach is suggestive of selective picking and choosing of elements from Knudson, Karoubas, and Lacasse using the claimed invention as a blueprint to reject the claims, and such an approach is improper. For at least these reasons, the rejection of claims 14-15, 17, 20, and 28 should be reconsidered and withdrawn.

New Claims 31 and 32

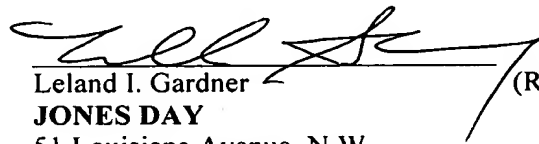
New claims 31 and 32 directed to further exemplary subject matter have been added herein to round out the scope of protection sought. These claims depend from claims 1 and 15 respectively. Support for claims 31 and 32 may be found at paragraphs 0048-0050 of the present published application, wherein one of skill in the art would understand that an exemplary building panel formed with transverse corrugations in the curved central portion of the panel, but not in the sidewall portions, would have a curve along its length in the longitudinal direction due to the effective contraction of the panel along its length in the central portion. These claims are patentable over Lacasse and Karoubas, which were applied against claims 1 and 15, at least by virtue of their dependency from claims 1 and 15. Moreover, these claims are further distinguishable over Lacasse and Karoubas insofar as neither of those references disclose panels curved in a longitudinal direction.

Conclusion

In light of the above amendments and remarks, the Applicant respectfully requests that the Examiner reconsider this application with a view towards allowance. The Examiner is invited to call the undersigned at 202-879-3625 if a telephone call could help resolve any remaining items.

Respectfully submitted,

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